

U.S. Army Center for Health Promotion and Preventive Medicine

A SOLDIER'S GUIDE TO STAYING HEALTHY IN INDIA

SHG 007-0302



DISTRIBUTION: UNLIMITED

A SOLDIER'S GUIDE TO STAYING HEALTHY IN INDIA

Table of Contents

	Page
INTRODUCTION.....	1
INDIA OVERVIEW	2
INDIA RISK ASSESSMENT	2
INCREASED REGIONAL DISEASE THREATS.....	3
FIELD SANITATION TEAM.....	3
TOXIC INDUSTRIAL CHEMICALS AND MATERIALS.....	3
VECTOR-BORNE DISEASES	3
FOOD-BORNE AND WATER-BORNE DISEASES.....	4
HOT AND COLD WEATHER INJURIES	4
SAND, WIND, AND DUST	4
HAZARDOUS ANIMALS AND PLANTS	5
SEXUALLY TRANSMITTED DISEASES	5
HIGH ELEVATIONS	6
HEARING PROTECTION	6
ORAL HEALTH	6
SKIN DISEASES	7
PRE-DEPLOYMENT HEALTH INFORMATION	7
INFORMATION ABOUT YOUR HEALTH CARE WHILE DEPLOYED	7
POST-DEPLOYMENT HEALTH INFORMATION.....	7

INTRODUCTION

This country-specific guide should be used in conjunction with [GTA 08-05-062, Guide to Staying Healthy](#), and is intended to provide information that can help reduce your risk of Disease and Non-battle Injuries (DNBI) when deployed. This health threat and countermeasure information is based on the most current data available from U.S. Department of Defense medical agencies at the time of production. In addition to the information in this guide, you should also receive force health protection, health threat, and preventive medicine countermeasures training/briefings prior to and, as required, throughout the length of your deployment.

INDIA OVERVIEW

[India](#) is the seventh largest country in the world at slightly more than one-third the size of the United States. The country is composed of four geographic regions: the Himalayas, the Indo-Gangetic Plain, the northwest desert region, and the Indian Peninsula. The Himalayas are in northern India and consist of three parallel mountain ranges interspersed with large plateaus and valleys. The rugged, steep mountains are covered with snow year-round and average 20,000 feet in height. Further south is the Indo-Gangetic Plain, a large flood plain. The desert region of the northwest contains sand dunes and ridges, some almost 200 feet high. The Indian Peninsula is an interior plateau that is bordered by parallel mountain ranges. Offshore islands include the Andaman and Nicobar Islands in the eastern Indian Ocean and Lakshadweep Islands in the Arabian Sea. Borders of India include Bhutan, Bangladesh, Burma, and the Bay of Bengal in the east, the Indian Ocean in the south, Pakistan and the Arabian Sea in the west, and China and Nepal in the north. The elevation ranges from sea level along the Indian Ocean to over 28,000 feet in the Himalayas. India has three seasons that are heavily influenced by the Asiatic monsoon, the predominant wind system. The cool season, from November through February, is marked by light northerly winds that bring clear skies and dry weather. On the Indo-Gangetic Plain, the average daily temperature is 45° F. The Himalayas have temperatures that fall significantly below freezing, while the south is more moderate with an average of 61° F. The hot season, March through May, is sunny and dry with an average daily high of 100° F. The northwestern desert is one of the hottest places in the world with average daily highs of 114° F. Considerably cooler temperatures are present in the Himalayas. The southwesterly monsoon, from June through October, brings the rainy season with average high temperatures of 77° to 86° F. The average annual rainfall varies from less than 2 inches in the northwest desert region to 450 inches along the Himalayas' northeastern slopes. Each year during the rainy season, about four to six tropical cyclones originate in the Arabian Sea and Bay of Bengal causing torrential rain, gales, and storm surges.

INDIA RISK ASSESSMENT

Based on a combination of all major infectious diseases that occur in a country, an [overall country risk level](#) is assigned as low, intermediate, high, or highest risk. India is HIGH RISK for infectious diseases. Diseases of military importance to forces deployed to India include [hepatitis A and E](#), [typhoid fever](#), and several diarrheal diseases to include [cholera](#), all acquired by consuming contaminated food, water, and dairy products; vector-borne diseases such as [dengue fever](#), [malaria](#), [Japanese encephalitis](#), and [scrub typhus](#), which are acquired through the bites of mosquitoes and mites; [leptospirosis](#) and [schistosomiasis](#) from swimming, wading, or other skin contact with contaminated water; [rabies](#) and [Q fever](#) from animal contact; and [sexually transmitted diseases](#). Environmental factors also pose a significant health risk to deployed forces and include sewage, agricultural, and industrial contamination of water and food supplies; limited water supplies; widespread sanitation problems; seasonal extreme heat and cold; high altitude in northern India; and localized industrial air and soil

pollution. Natural disasters can occur and include earthquakes, floods, landslides, and seasonal monsoons.

INCREASED REGIONAL DISEASE THREATS

Increased vector-borne disease threats include dengue fever, malaria, and Japanese encephalitis. All are transmitted year-round and countrywide in both urban and rural areas (excluding elevations above 6,000 feet). There is an increased risk along the coastal areas and during the rainy seasons due to increased mosquito populations. Japanese encephalitis risks are increased if you are in close proximity to an area that has flooded agricultural fields, water birds, and domestic pigs.

Rabies is widespread and a major public health problem. India has some of the highest death rates due to rabies in the world with about 30,000 deaths each year. Dogs and cats with rabies are extremely common. Dogs are the main source of human exposure.

FIELD SANITATION TEAM

Each company-sized unit has a Field Sanitation Team (FST) whose members are trained (40-hour course) and fully equipped IAW [AR 40-5](#), [FM 4-25.12](#), and [FORSCOM REG 700-2](#). Know who the members of your FST are, and know how they can assist in preventing medical threats to your health. Become familiar with FST equipment and training.

TOXIC INDUSTRIAL CHEMICALS AND MATERIALS

When deployed, you may face health risks from industrial chemicals and materials as a result of activities by terrorists or warring parties; accidents related to improper design, maintenance, or operation of indigenous industrial facilities; inadvertent exposure to toxic waste materials in the environment; or improper handling or disposal of hazardous material with which our own forces deploy. The degree of health risks depends upon many parameters. Consult your medical authority for additional information.

VECTOR-BORNE DISEASES

Several vector-borne diseases are present in India. They include [dengue fever](#), [malaria](#), and [Japanese encephalitis](#) from mosquitoes and [scrub typhus](#) from rodent mites. There are many other diseases spread by the bites of mosquitoes, ticks, fleas, and sand flies. Your local medical authority will determine if these diseases or other vector-borne diseases are a threat in your specific location and provide appropriate countermeasures.

- Take your malaria prevention pills when directed to do so. This is CRITICAL. Normally, you will begin taking medication prior to arriving in the area, while in the area, and after returning home.

- Use the [DOD Insect Repellent System](#) detailed in [GTA 08-05-062](#) to reduce your risk of acquiring a vector-borne disease. Wear permethrin-treated uniforms with trousers tucked into boots, sleeves rolled down, and undershirt tucked into trousers. Wear DEET on exposed skin.
- When deployed to this region, [sleep under a permethrin-treated bed net](#) to repel insects and further reduce risks of vector-borne diseases. Many insects in this region feed during the night, including mosquitoes that transmit malaria.
- When using both DEET and sunscreen products, apply sunscreen to the skin first so it does not interfere with the effectiveness of the DEET. After 30 minutes to an hour, apply the DEET. This allows the sunscreen to penetrate and bind to the skin first.

FOOD-BORNE AND WATER-BORNE DISEASES

The diseases of greatest risk throughout the region, in both rural and urban areas, are [bacterial \(traveler's\) diarrhea](#), [hepatitis A and E](#), and [typhoid fever](#), associated with contaminated food, water, and ice. India is one of the highest risk areas in the world for hepatitis E. Risk of food-borne and water-borne diseases is increased during the hot and rainy seasons. Sanitation is poor throughout the country, including major urban areas. Do not consume any food, water, or beverages (to include bottled water) that have not been approved by the U.S. military. Assume all non-approved food, ice, and water is contaminated. Water and food items available in this region, including dairy products, fish, fruits, and vegetables, may contain unsafe levels of pesticides, chemical fertilizers, bacteria, and viruses. Contamination with human or animal waste is widespread. Even a one-time consumption of these foods or water may cause severe illness. See [GTA 08-05-062](#) for appropriate countermeasures.

HOT AND COLD WEATHER INJURIES

Temperature extremes in this region may impact military operations. Heat injuries are possible when deployed to this region, especially during the early phase of deployment; acclimatization is critical. The northwestern desert can have extreme highs of 127° F. Individual and unit countermeasures are extremely important. Cold injuries can also occur in the mountainous areas of this region. The effects of cold weather are more severe in high mountainous areas due to reduced oxygen and lower air pressure. When deploying to the mountainous areas in this region, check with your unit on the requirement for packing the extended cold weather clothing system. See [GTA 08-05-062](#) for appropriate countermeasures.

SAND, WIND, AND DUST

Sand, wind, and dust cause health problems, particularly to skin, eyes, throat and lungs. Take care of problems early to avoid infection. Dry air, dust and wind dry out the nose and throat and can also cause nosebleeds, coughing and wheezing. Cracked, chapped fingers reduce manual dexterity. Body areas (such as ears, armpits, groin, elbows, knees, feet, and the area under breasts) that collect dust and sand are susceptible to

chafing, abrasion and infection. High winds can turn tent pegs and loose objects into flying missiles (which may not be visible in blowing sand).

- Take a daily sponge bath, using an approved water source.
- Wash your face and eyelids several times per day.
- Carry at least two pairs of glasses and a copy of your prescription. Do not wear contact lenses; [AR 40-63](#) prohibits contact lens use during a military deployment.
- Breathe through a wet face cloth, or coat the nostrils with a small amount of petroleum jelly to minimize drying of mucous membranes. Protect your lips with lip balm.
- Shield your face with cloth materials to protect from blowing dust and sand.
- Wear goggles to protect your eyes from wind, dust and sand or when traveling in open vehicles.
- Wear gloves and use moisturizing skin lotion to protect your hands.

HAZARDOUS ANIMALS AND PLANTS

- Many species of highly poisonous snakes, which are well camouflaged and very aggressive, live in India. Consider any snake encountered as poisonous, and do not handle. Seek immediate medical attention if bitten; untreated snakebites may cause serious illness or death within 1 hour.
- Several species of spiders and scorpions, some of which may have potentially fatal venom, are present throughout the country. If possible, avoid sleeping on the ground. Shake out boots, bedding, and clothing prior to use, and never walk barefoot. If bitten or stung, seek medical attention immediately.
- Some regional plants have thorns, stinging hairs, or toxic resins that may puncture the skin or introduce poison into the skin causing skin irritation, rashes or infections. Avoid skin contact with plants when tactically feasible.
- Contact with the smoke from the burning of these plants can also cause skin rashes and damage to your lungs.
- Clean your clothing after contact with harmful plants. Decontaminate clothing by washing with soap and water.
- Some regional plants may cause systemic poisoning if leaves, berries, flowers, or other plant parts are chewed or swallowed. Symptoms include dizziness, vomiting, irregular heartbeat, and delirium or hallucinations.

SEXUALLY TRANSMITTED DISEASES

[Sexually transmitted diseases](#) are highly prevalent in this region. Gonorrhea, chlamydia, and other infections are common, and may affect a high percentage of personnel who have sexual contact. Human immunodeficiency virus (HIV) and hepatitis B occur throughout the region. Though the immediate impact of HIV and hepatitis B on an operation is limited, the long-term impact on your individual health is substantial. See [GTA 08-05-062](#) for appropriate countermeasures.

HIGH ELEVATIONS

High altitude illnesses can kill. Military operations occurring at elevations over 6,000 feet can seriously impact unit and individual effectiveness. Serious illness or death can result if you ascend rapidly without allowing for acclimatization. Remain well hydrated; individual water requirements are greater at higher altitudes.

- When deployed to high mountain areas, be observant of the common symptoms of mountain sickness: headache, nausea, vomiting, dizziness, fatigue, irritability, and coughing. Seek medical attention immediately if you experience any of these symptoms.
- Pyridostigmine bromide tablets may increase the chance of dizziness or fainting during the first 24 hours at high altitude if you are not acclimatized.
- Lower oxygen levels at high altitudes ("thin air") combined with the heavier work requirements when wearing mission-oriented protective posture (MOPP) gear can increase your risk of high altitude illnesses. When wearing MOPP gear at higher altitudes, you may require more time and concentration to perform assigned tasks.
- For appropriate countermeasures during high altitude operations, see [GTA 08-05-062](#) and [GTA 08-05-060, A Soldier's Guide to Staying Healthy at High Elevations](#).

HEARING PROTECTION

It is essential that you use properly fitted hearing protection during military operations. Exposure to high-intensity noise may cause hearing loss that can adversely affect your combat effectiveness and individual readiness. Good hearing is essential to mission success. If you are a dismounted soldier, the [Combat Arms Earplug](#) (NSN 6515-01-466-2710) will protect you from the impact noise of weapons fire while only slightly interfering with voice communications and detection of combat sounds such as vehicle noise, footfalls in leaves, and the closing of a rifle bolt. While not as effective as the Combat Arms Earplug in preserving your ability to hear important mission-related sounds, noise muffs or standard earplugs are very effective in preventing noise-induced injury. If you are a member of vehicle or helicopter crews, your combat vehicle crew or aircrew helmets have built-in hearing protectors.

ORAL HEALTH

Dental disease is a common problem during deployments due to the challenge of maintaining good oral hygiene. You should deploy with toothbrush, dental floss, and fluoride toothpaste. Daily flossing and twice daily brushing of teeth is the best way to ensure prevention of periodontal disease and to decrease your risk of problems such as trench mouth and tooth decay. In difficult tactical environments, teeth should be brushed at least once a day. Seek medical attention immediately at the onset of any dental problems.

SKIN DISEASES

Skin irritations and infections, such as athlete's foot and ringworm, are common medical threats during any deployment and are commonly caused by fungi. The best prevention is to maintain clean, dry skin. See [GTA 08-05-062](#) for additional countermeasure information.

PRE-DEPLOYMENT HEALTH INFORMATION

- [Complete the Pre-Deployment Health Assessment \(DD FORM 2795\)](#) to assess your state of health before deployment and to assist health care providers in identifying your medical needs and providing present and future medical care to you.
- You will not have access to your health care record during the deployment. The Adult Preventive and Chronic Care Flowsheet ([DD FORM 2766](#)) will be used as your deployment health record. This document will include information on all your immunizations, any medications you are currently taking, and any ongoing medical problems that you may have. When you go through readiness processing, ensure that all appropriate information is documented on your DD FORM 2766. When you return home, this information will be placed in your regular health record.

INFORMATION ABOUT YOUR HEALTH CARE WHILE DEPLOYED

- It is important that you know where to seek health care while deployed. This may or may not be through the same channels as your home station. Ask your chain of command for more information.
- While deployed, you must maintain your health and seek care whenever an illness or injury threatens your ability to complete your tasks. Your unit is depending on you. It is always better to seek care early so that your problems can be documented appropriately and taken care of immediately.

[POST-DEPLOYMENT HEALTH INFORMATION](#)

- [Complete the Post-Deployment Health Assessment \(DD FORM 2796\)](#) to assess your state of health after deployment and to assist health care providers in identifying your medical needs and providing present and future medical care to you.
- If you become sick after you return home, tell your physician that you were deployed.
- Complete malaria medications as directed, and receive follow-on medical care/tests as directed.

Contact your Preventive Medicine or Medical Support Unit for more information.



Prepared by:

U.S. Army Center for Health Promotion & Preventive Medicine

<http://chppm-www.apgea.army.mil>

SIPRNet: <http://usachppm1.army.smil.mil>

(800) 222-9698/ DSN 584-4375/(410) 436-4375